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Chun-Huai Li

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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,646	Applicant(s) LI, CHUN-HUAI	
	Examiner Kevin M. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Specification

1. The spacing of the lines of the specification is such as to make reading difficult. New application papers with lines 1½ or double spaced on good quality paper are required.
2. The claims are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).
3. The applicant amended the specification filed 8/16/2006, beginning on paragraphs [0013], [0023], [0025], and [0027], which is acknowledged. Said amendment to specification is entered.
4. The applicant amended the specification filed 8/16/2006, beginning on paragraphs [0012] and [0022], which is acknowledged. However, said amendment to specification is not entered because of new subject matter added.
5. The amendment filed 8/16/2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Applicant added and amended new subject matter beginning on paragraphs [0012] and [0022] as indicted the claimed feature "*wherein the active-type light emitting*

Art Unit: 2629

devices being electrically connected to the first active device as many-to-one mapping relation."

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims above, the applicant introduces new subject matter as read in light of the specification into the claim 1, such as claimed feature "*wherein the active-type light emitting devices being electrically connected to the first active device as many-to-one mapping relation*", as recited in independent claim 1, lines 12-14, and recited in claim 11, lines 12-14. The original disclosure does not support the new subject matter as indicated above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Friend et al (US 6,429,601) hereinafter Friend.

9. As to claim 1, Friend teaches a pixel structure of an active matrix display device [Fig. 5], the active matrix display device having a source of first potential [12] and a source of second potential [20], the pixel structure comprising:

a plurality of active-type light emitting devices [19a, 19b, 19c, 19d] connected in parallel with each other *[the light-emitting areas couple is defined as parallel strips running across the pixel, as in Fig. 3, or in other ways, inter alia, col. 8, lines 1-2]*, each of the active-type light emitting devices [19a, 19b, 19c, 19d] being electrically connected between the source of first potential [12], the source of second potential [20] *[see Fig. 5, col. 4, lines 34-46, and col. 5, lines 34-60]*.

a first active device [13a] having a first end electrically connected to a scanning line [10], a second end electrically connected to a data line [11a], and a third end electrically connected to a switching end [15] of each of the active-type light emitting

Art Unit: 2629

devices [19a-19d], wherein the active-type light emitting devices [19a-19d] being electrically connected to the first active device [13a-13d] as many-to-one mapping relation *[column 6 and figure 3 of Friends show a structure of the active device 13a is corresponding to the light emitting device 19a in a row, a structure of 13b is corresponding to 19b in a row, a structure of 13c is corresponding to 19c in a row, and a structure of 13d is corresponding to 19d in a row]; and*

a storage capacitor [14a] having a first electrode electrically connected to the third end of the first active device [13a] and the switching end of the active-type lights emitting devices [19a-19d], and a second electrodes electrically connected to the source of first potential end *[a ground voltage line 12, see col. 5, lines 34-67 for further details of the description]*.

10. As to claim 2, Friend teaches the pixel structure of claim 1, wherein the first active device [14a, Fig. 5] is a first thin film transistor¹ [TFT], and the first end is a gate electrode of the first thin film transistor, the second end is a drain electrode of the first thin film transistor, and the third end is a source electrode of the first thin film transistor [the thin-film transistor 7 corresponding to the TFT 14a which includes a gate electrode, a source electrode, and drain electrode², see col. 1, lines 50-64, col. 4, lines 3-14, and col. 5, lines 44-46].

11. As to claim 3, Friend teaches the pixel structure of claim 1, wherein the storage capacitor [14a] is electrically connected between the third end of the first active device [13a] and the source of first potential [12] *[It is noted that the ground voltage or the*

¹ See http://en.wikipedia.org/wiki/Thin_film_transistor

common voltage is a constant DC voltage source, see Fig. 5, col. 5, lines 37-40, and col. 1, lines 53-56 for details].

12. As to claim 4, Friend teaches the pixel structure of claim 3, wherein the source of first potential is utilized for supplying a constant potential *[It is noted that the ground voltage or the common voltage is a constant DC voltage source].*

13. As to claim 5, Friend teaches the pixel structure of claim 1, wherein each of the active-type light emitting devices comprises: a second active device [15a, Fig. 5] having a fourth end electrically connected to the third end of the first active device [13a], a fifth end connected to the source of first potential [12], and a sixth end, wherein the fourth end is the switching end *[a gate of TFT 15a is switching on and off]; and*

a light emitting device [19a] having a seventh end connected to the sixth end and an eighth end connected to the source of second potential [20, see Fig. 5, col. 4, lines 34-46, and col. 5, lines 34-60].

14. As to claim 6, Friend teaches the pixel structure of claim 5, wherein when an electrical shortage occurs in one of the active-type light emitting devices [19a-19d], the pixel structure displays an image via the other active-type light emitting devices *[column 6 and Figure 6 of Friend reference clearly show the matrix display structure with scan lines (25) and data lines (26). It is inherent in any matrix display that other pixel (22) will work when one pixel (22) goes bad or become defective].*

² See http://en.wikipedia.org/wiki/Field-effect_transistor

Art Unit: 2629

15. As to claim 7, Friend teaches the pixel structure of claim 5, wherein each of the second active devices [15a, 15b, 15c, 15d] comprises a second thin film transistor [19b, see Fig. 5, col. 4, lines 34-46, and col. 5, lines 34-60].

16. As to claim 8, Friend teaches the pixel structure of claim 7, wherein the fourth end is a gate electrode of the second thin film transistor [15b], the fifth end is a source electrode of the second thin film transistor [15b], and the sixth end is a drain electrode of the second thin film transistor [15b, see Fig. 5. It is noted that each of TFT 15 has a gate electrode, a source electrode, and drain electrode].

17. As to claim 9, Friend teaches the pixel structure of claim 5, wherein each of the light emitting devices comprises an organic light emitting diode (OLED) [see col. 3, lines 41-53].

18. As to claim 10, Friend teaches the pixel structure of claim 9, wherein the seventh end is an anode of the light emitting device, and the eighth end serves as a cathode of the light emitting device [it is noted that at least a OLED 19a has an anode and a cathode, see Fig. 15, col. 5, lines 51-57].

19. As to claim 11, Friend teaches an active matrix display device [Figs. 5 and 6] comprising:

referring to fig. 6, a plurality of scanning lines [25];

a plurality of data lines [26];

a plurality of pixels [22, 23, see Fig. 6, col. 6, lines 26-51], each of the pixels electrically connected to one corresponding scanning line and one corresponding data

Art Unit: 2629

lines [column 6 and Figure 6 of Friend reference clearly shows the matrix display structure with scan lines (25) and data lines (26)] , each of the pixels comprising:

referring to Fig. 5, a storage capacitor [14a];

a first active device [13a] having a first end electrically connected to the corresponding scanning line [10], a second end electrically connected to the corresponding data line [11a], and a third end capacitor [14a]; and

a plurality of active-type light emitting devices [19a, 19b, 19c, 19d] electrically connected in parallel with each other *[the light-emitting areas couple is defined as parallel strips running across the pixel, as in Fig. 3, or in other ways, inter alia, col. 8, lines 1-2]*, each of the active-type light emitting devices being connected between a source of first potential [12] and, a source of second potential [20], wherein the active-type light emitting devices being electrically connected to the first active device as many-to-one mapping relation [column 6 and figure 3 of Friends show a structure of the active device 13a is corresponding to the light emitting device 19a in a row, a structure of 13b is corresponding to 19b in a row, a structure of 13c is corresponding to 19c in a row, and a structure of 13d is corresponding to 19d in a row], each of the active-type light emitting devices [19a, 19b, 19c, 19d] comprising:

a light emitting device [19a] electrically connected to the source of second potential [20]; and

a second active device [15a] having a fourth end electrically connected to the third end, a fifth end electrically connected to the source of first potential [12], and a

Art Unit: 2629

sixth end electrically connected to the light emitting device [19a, col. 4, lines 34-46, and col. 5, lines 34-60]; and

a storage capacitor [14a] having a first electrode electrically connected to the third end of the first active device [13a] and the fourth end of the active-type light emitting devices [19a-19d], and second electrode electrically connected to the source of the first potential end *[a common electrode 12 or a ground voltage line 12, see col. 5, lines 34-67 for further details of the description]*.

The limitation of claim 12 is the same as those of claim 2 and therefore the claim will be rejected using the same rationale.

The limitation of claim 13 is the same as those of claim 3 and therefore the claim will be rejected using the same rationale.

The limitation of claim 14 is the same as those of claim 4 and therefore the claim will be rejected using the same rationale.

The limitation of claim 15 is the same as those of claim 5 and therefore the claim will be rejected using the same rationale.

The limitation of claim 16 is the same as those of claim 8 and therefore the claim will be rejected using the same rationale.

The limitation of claim 17 is the same as those of claim 9 and therefore the claim will be rejected using the same rationale.

The limitation of claim 18 is the same as those of claim 6 and therefore the claim will be rejected using the same rationale.

Response to Arguments

20. Applicant's arguments filed 08/16/2006 have been fully considered but they are not persuasive.

21. Applicant argues with respect to claims 1 and 11 "a pixel structure, in which a plurality of active-type light emitting devices are connected in parallel with each other, and the active-type light emitting devices are connected to the first active devices as many-to-one mapping relation, to resolve shortage defects resulting from process error during devices fabrication. When an electrical shortage occurs in one of the active-type light emitting devices of a pixel, the pixel still can display an image via other active-type light emitting device of the pixel."

In response, the examiner respectfully disagrees. As stated *supra* with respect to claims 1 and 11, the examiner finds that Friend discloses the light-emitting areas couple is defined as parallel strips running across the pixel, as in Fig. 3, or in other ways, *inter alia*, col. 8, lines 1-2. Column 6 and figure 3 of Friend show a structure of the active device 13a is corresponding to the light emitting device 19a in a row, a structure of 13b is corresponding to 19b in a row, a structure of 13c is corresponding to 19c in a row, and a structure of 13d is corresponding to 19d in a row.

Therefore, in summary, based on the above-identified explanation, column 6, and Figure 6 of Friend reference clearly show the matrix display structure with scan lines (25) and data lines (26). It is inherent in any matrix display that other pixel (22) will work when one pixel (22) goes bad or become defective.

For these reasons, the rejections based on Friend have been maintained.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 9:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor RICHARD A. HJERPE can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMN
September 29, 2006

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